RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 09/977,579A
Source: IFW16
Date Processed by STIC: 11/08/2005

ENTERED

IFW16

RAW SEQUENCE LISTING DATE: 11/08/2005
PATENT APPLICATION: **US/09/977,579A** TIME: 07:51:54

Input Set : **A:\PTO.TS.TXT**
Output Set: **N:\CRF4\11082005\I977579A.raw**

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      3 <110> APPLICANT: Cambridge University Technical Services
      5 <120> TITLE OF INVENTION: A novel family of beta sub-unit proteins from a voltage
gated sodium
      6       channel nucleic acids encoding them and therapeutic or diagnostic uses thereof
      8 <130> FILE REFERENCE: 674558-2001
C--> 10 <140> CURRENT APPLICATION NUMBER: US/09/977,579A
     11 <141> CURRENT FILING DATE: 2001-10-15
     13 <150> PRIOR APPLICATION NUMBER: PCT/EP00/01783
     14 <151> PRIOR FILING DATE: 2000-02-24
     16 <150> PRIOR APPLICATION NUMBER: 60,129,473
     17 <151> PRIOR FILING DATE: 2000-02-24
     19 <160> NUMBER OF SEQ ID NOS: 49
     21 <170> SOFTWARE: PatentIn version 3.2
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     25 <211> LENGTH: 215
     26 <212> TYPE: PRT
     27 <213> ORGANISM: Rat
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     34 Tyr Trp Val Arg Val Cys Phe Pro Val Cys Val Glu Val Pro Ser Glu
     35            20                  25                  30
     37 Thr Glu Ala Val Gln Gly Asn Pro Met Lys Leu Arg Cys Ile Ser Cys
     38         35                  40                  45
     40 Met Lys Arg Glu Glu Val Glu Ala Thr Thr Val Val Glu Trp Phe Tyr
     41     50                  55                  60
     43 Arg Pro Glu Gly Gly Lys Asp Phe Leu Ile Tyr Glu Tyr Arg Asn Gly
     44 65                  70                  75                  80
     46 His Gln Glu Val Glu Ser Pro Phe Gln Gly Arg Leu Gln Trp Asn Gly
     47                 85                  90                  95
     49 Ser Lys Asp Leu Gln Asp Val Ser Ile Thr Val Leu Asn Val Thr Leu
     50             100                 105                 110
     52 Asn Asp Ser Gly Leu Tyr Thr Cys Asn Val Ser Arg Glu Phe Glu Phe
     53         115                 120                 125
     55 Glu Ala His Arg Pro Phe Val Lys Thr Thr Arg Leu Ile Pro Leu Arg
     56     130                 135                 140
     58 Val Thr Glu Glu Ala Gly Glu Asp Phe Thr Ser Val Val Ser Glu Ile
     59 145                 150                 155                 160
     61 Met Met Tyr Ile Leu Leu Val Phe Leu Thr Leu Trp Leu Phe Ile Glu
     62                 165                 170                 175
     64 Met Ile Tyr Cys Tyr Arg Lys Val Ser Lys Ala Glu Glu Ala Ala Gln
     65             180                 185                 190
     67 Glu Asn Ala Ser Asp Tyr Leu Ala Ile Pro Ser Glu Asn Lys Glu Asn
     68         195                 200                 205
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75 <211> LENGTH: 215
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77 <213> ORGANISM: Homo sapiens
79 <400> SEQUENCE: 2
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84 Tyr Trp Val Ser Val Cys Phe Pro Val Cys Val Glu Val Pro Ser Glu
85             20                  25                  30
87 Thr Glu Ala Val Gln Gly Asn Pro Met Lys Leu Arg Cys Ile Ser Cys
88         35                  40                  45
90 Met Lys Arg Glu Glu Val Glu Ala Thr Thr Val Val Glu Trp Phe Tyr
91     50                  55                  60
93 Arg Pro Glu Gly Gly Lys Asp Phe Leu Ile Tyr Glu Tyr Arg Asn Gly
94 65                  70                  75                  80
96 His Gln Glu Val Glu Ser Pro Phe Gln Gly Arg Leu Gln Trp Asn Gly
97                 85                  90                  95
99 Ser Lys Asp Leu Gln Asp Val Ser Ile Thr Val Leu Asn Val Thr Leu
100             100                 105                 110
102 Asn Asp Ser Gly Leu Tyr Thr Cys Asn Val Ser Arg Glu Phe Glu Phe
103         115                 120                 125
105 Glu Ala His Arg Pro Phe Val Lys Thr Thr Arg Leu Ile Pro Leu Arg
106     130                 135                 140
108 Val Thr Glu Glu Ala Gly Glu Asp Phe Thr Ser Val Val Ser Glu Ile
109 145                 150                 155                 160
111 Met Met Tyr Ile Leu Leu Val Phe Leu Thr Leu Trp Leu Leu Ile Glu
112                 165                 170                 175
114 Met Ile Tyr Cys Tyr Arg Lys Val Ser Lys Ala Glu Glu Ala Ala Gln
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126 <212> TYPE: DNA
127 <213> ORGANISM: rat
129 <400> SEQUENCE: 3
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132 atccaggaac gcgccccacg gaaaggggtc cctcggtcta cccatcctcc acctctgaga    120
134 tcacccaccc caccggaggt cccacctctt tccacccctg aaggacctcc tgtgagcccg    180
136 ggaccctgtg tacaggactg aagtggaaca aattctgtag cccagacgac ggctggagtg    240
138 gggacacgcc caactgaaga agcctgcccc gccgtagaag cccgagatcc tgagtctcgg    300
140 tggattgaag tcgttgtccc tgggggaggc aagagcttca gaaatcgctt acggtggaaa    360
142 agatgcctgc cttcaacaga ttgcttcccc tagcttctct agtgctcatc tactgggtca    420
144 gagtctgctt ccctgtgtgt gtggaagtgc cctcggagac agaagcggtg cagggcaatc    480
146 ccatgaagct gaggtgcatc tcctgcatga agagggagga ggtggaggcc accactgtgg    540
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Input Set : **A:\PTO.TS.TXT**
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148 tggagtggtt ctacaggcct gagggcggta aagatttcct tatatatgag tatcggaatg 600
150 gccaccagga agtggagagc cccttccaag gccgtctgca gtggaatggg agcaaagacc 660
152 tgcaggacgt atccatcact gtactcaatg tcactttgaa tgactctggc ctctacacat 720
154 gcaatgtgtc cagggagttc gaattcgagg cacacaggcc ttttgtgaag accacgagac 780
156 tgataccttt gcgagtcact gaagaggcgg gagaagactt cacctccgtg gtctcggaaa 840
158 tcatgatgta catcctcctg gtcttcctca ccttgtggct gtttattgag atgatctatt 900
160 gctacagaaa ggtctctaag gccgaagagg cagcacagga aaatgcgtct gactaccttg 960
162 ctatcccttc agagaacaag gagaactctg tggtacctgt ggaggaataa tgtggtgtga 1020
164 cttgaggtga tgtacacagg catctgggag ggtgatctga gtgctgaggg actggatatc 1080
166 cccagttcag tgatgccagc aatatcagga agtgccccag gtgtcccaac acatccatct 1140
168 tttctattca tcaaccacca acccaatgtg agattttcac ctgacttccg aactctatca 1200
170 gaactctaca catctttacc ttgcctgaac cgaagagcca acatctatct ctacacggac 1260
172 taaacctcac tctgttcttg cttccaacca agtaactccc aacttaacta gagttgttcc 1320
174 ctatgttcca aatgatttag acaagtactg gagagtagta ttacctctgc cctgactgtc 1380
176 tgtgactggg tcattctcca ctgcagcaaa aggatggata taaatcggaa gaaagccctg 1440
178 actagtttgt cttaaagcca aagcgtgcca cgtacgtact ttgattcatt gaagtcagtt 1500
180 tttcctgctt ctcagagcgc cagaaagcat gcccctaatg cttgcaggga catcatctgt 1560
182 gtgcactgga acgctttctg gagctcagtg tttggaggct gtatccccat aatcctgaag 1620
184 acctggagca aacccagaac ttccaggaag tcccaaggaa ggatccagga cagtttcagg 1680
186 gtctcgaaaa tgatataaca cactcctgat attggaaaca tggatgagtg acctttctgg 1740
188 attgaaactc ctcagttctt catgtctcag tgtctgtgga tcagtattag tcctcgtttt 1800
190 acaggaggaa actgagactc acacaaggct gaacaggaca tttaggggat taaactgggc 1860
192 cagagatgac tttcctgcca ccaacctcac actccctggg atgagaggta tttttgagga 1920
194 ctctaacatt cagcatgcca tttgcccagc ggaagctgac tgccacagat ctgaggaact 1980
196 ggaaaccagg taagaaaaca cagacggcat gagatagact tcaggatttc acacaaagat 2040
198 ttgtgaatct gaagcatcct ccaggagaga cggcacccga gggcaatatc tctgtgatga 2100
200 aaaatggttt tagtctgaaa tggacagtca acagagagac aaagatgggc gtgtagcttc 2160
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206 <211> LENGTH: 1261
207 <212> TYPE: DNA
208 <213> ORGANISM: Homo sapiens
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213 aagctggagt tccggggtgg gcggggaggc gactgtccgt ggtgctgagc gccggcgaga 120
215 gcgggcgcgg agcggctgat cggctccctc gaactgggga ggtccagtgg ggtcgcttag 180
217 ggcccaaagc ccccacccgg ctccaaaagc tcccagggcc tccccaggca ccggtgctcg 240
219 gcccttcctt cggtcagaaa gtcgcccccc gggggcagtt cgtcccaaag ggtttcctcg 300
221 aaagaatctg agagggcgca gtccttgacc gagggaatct ctctgtgtag ccttggaagc 360
223 cgccagcccc agaagatgcc tgccttcaat agattgtttc ccctggcttc tctcgtgctt 420
225 atctactggg tcagtgtctg cttccctgtg tgtgtggaag tgccctcgga gacggaggcc 480
227 gtgcagggca accccatgaa gctgcgctgc atctcctgca tgaagagaga ggaggtggag 540
229 gccaccacgg tggtggaatg gttctacagg cccgagggcg gtaaagattt ccttatttac 600
231 gagtatcgga atggccacca ggaggtggag agccccttc aggggcgcct gcagtggaat 660
233 ggcagcaagg acctgcagga cgtgtccatc actgtgctca acgtcactct gaacgactct 720
235 ggcctctaca cctgcaatgt gtcccgggag tttgagtttg aggcgcatcg gccctttgtg 780
237 aagacgacgc ggctgatccc cctaagagtc accgaggagg ctggagagga cttcacctct 840
239 gtggtctcag aaatcatgat gtacatcctt ctggtcttcc tcaccctgtg gctgctcatc 900
241 gagatgatat attgctacag aaaggtctca aaagccgaag aggcagccca agaaaacgcg 960

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Input Set : **A:\PTO.TS.TXT**
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243 tctgactacc ttgccatccc atctgagaac aaggagaact ctgcggtacc agtggaggaa 1020
245 tagaacagga gcagtgtgac atgaggtggc ctgaacacct gagggactgg acatcccatg 1080
247 ttcagcaatg tcaatggcat caggagggcg ccccaagggc cccatcgctt cccttcatgc 1140
249 atccattgtt ctgttcattc attcatccat acatccacct gcctctgagc tttcacctct 1200
251 gactccctaa ctccatcaga cctctacgca ccataagact ctgccagaac tgagaagccg 1260
253 g 1261
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266 Tyr Trp Val Ser Val Cys Phe Pro
267 20
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271 <211> LENGTH: 24
272 <212> TYPE: PRT
273 <213> ORGANISM: rat
275 <400> SEQUENCE: 6
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280 Tyr Trp Val Arg Val Cys Phe Pro
281 20
284 <210> SEQ ID NO: 7
285 <211> LENGTH: 19
286 <212> TYPE: PRT
287 <213> ORGANISM: homo sapiens
289 <400> SEQUENCE: 7
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292 1 5 10 15
294 Tyr Trp Val
298 <210> SEQ ID NO: 8
299 <211> LENGTH: 19
300 <212> TYPE: PRT
301 <213> ORGANISM: rat
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308 Tyr Trp Val
312 <210> SEQ ID NO: 9
313 <211> LENGTH: 12
314 <212> TYPE: PRT
315 <213> ORGANISM: homo sapiens
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320 1 5 10
323 <210> SEQ ID NO: 10
324 <211> LENGTH: 12

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PATENT APPLICATION: US/09/977,579A TIME: 07:51:54

Input Set : A:\PTO.TS.TXT
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326 <213> ORGANISM: rat
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335 <211> LENGTH: 15
336 <212> TYPE: PRT
337 <213> ORGANISM: homo sapiens
339 <400> SEQUENCE: 11
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342 1               5                   10                  15
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346 <211> LENGTH: 15
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359 <213> ORGANISM: homo sapiens
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369 <212> TYPE: PRT
370 <213> ORGANISM: rat
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374 Arg Val Cys Phe Pro
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379 <211> LENGTH: 11
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381 <213> ORGANISM: Homo sapiens
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400 <210> SEQ ID NO: 17
401 <211> LENGTH: 39
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RAW SEQUENCE LISTING ERROR SUMMARY DATE: 11/08/2005
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Input Set : **A:\PTO.TS.TXT**
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Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:49; N Pos. 138

Invalid Line Length:
The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 6

VERIFICATION SUMMARY DATE: 11/08/2005
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L:10 M:270 C: Current Application Number differs, Replaced Current Application Number
L:941 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49 after pos.:120